

ABSTRACT OF THE DISCLOSURE

A ceramic heater system has a ceramic heater base having a substrate-mounting surface formed on the top surface thereof and a heater, buried in the heater base, for heating a substrate. A fluid passage is formed buried in the heater base below where the heater is buried. The heater base is cooled as a fluid whose temperature is lower than the temperature of the heater base is let flow in the fluid passage. A substrate processing apparatus has the ceramic heater system installed in a process chamber whose vacuum state can be maintained, a gas supply mechanism for feeding a gas into the process chamber, and a power supply. The substrate processing apparatus performs a heat treatment, etching and film deposition on a substrate placed in the process chamber.